Spill-Free Gaming:

CONNECTICUT'S CASINOS GENERATE FEW ADVERSE SPILLOVER EFFECTS

Connecticut's experiment in casino gaming allows us to test for adverse spillover effects.

BY STEVEN P. LANZA

Casino detractors have long argued that harmful side effects—problem gambling, higher crime rates, increased traffic congestion, and lower housing prices—make gaming a bad bet as an economic development strategy. The public benefits are straightforward enough: Foxwoods and Mohegan Sun add millions to State coffers every year. Gauging public costs is a bit dicier. But Connecticut's experiment in casino gaming, together with data from the U.S. Census and other sources, allows us to test for these so-called "negative externalities." In Connecticut at least, the evidence of any significant adverse spillover effects from the tribal casinos just isn't in the cards.

Gambling, long spurned as a criminal vice and consigned to dingy backrooms and dank alleyways, has gone legit, becoming a big, glitzy, mainstream business. After its introduction in Nevada in 1931, commercial casino gaming took 45 years to establish another beachhead in Atlantic City, New Jersey. Then in a sudden five-year spurt beginning in 1989, ten other states legalized commercial casino operations. At about the same time, Congress passed the federal Indian Gaming Regulatory Act (IGRA), which sanctioned high-stakes gaming on Native-American reservations. Since then, another 21 states have joined the Indian-gaming crowd, and Connecticut led the charge with Foxwoods and Mohegan Sun. Between 1995 and 2006, U.S. gross gaming revenue nearly doubled, from $45 billion to more than $80 billion—a 6% annual rate of growth.

WINTER OF OUR DISCONTENT

Despite the allure of a thriving industry, casino gaming's grand Connecticut opening in February 1992 stirred up a blizzard of controversy. In eastern Connecticut, where the prospect of flashy casinos threatened the tranquility of sleepy towns, opposition was especially loud and impassioned. Moral objections to gambling having receded over time with society's growing tolerance, opponents instead built their case against the casinos on the perceived negative social impacts. Chief among the charges: legalized gambling entails lost tax revenue, promotes problem gambling, contributes to traffic congestion, increases crime and lowers property values.

Have the fears of gaming foes been confirmed? Let's turn to some evidence.

Elsewhere in this issue Dennis Heffley and MaryJane Lenon closely track the fiscal trail of the casinos (see page 8). The footprints are hard to miss. Indian reservations hold sovereign nation status, so they are exempt from state and local taxation. The State of Connecticut did, however, negotiate an agreement for the operation of both Foxwoods and Mohegan Sun that entails the payment of 25% of the casinos' slot machine "win" (dollars wagered less dollars paid out) to the state. In fiscal year 2007, that payment totaled $430.5 million—more than half the amount collected through the state's corporate income tax. Each year, a portion of that sum ($91 million in FY 2007) is distributed to the state's 169 towns through the Pequot/Mohegan Fund (see the centerfold), in part to offset the inability of towns to levy assessments of their own.

The incidence of problem gambling is far less easy to quantify. Detailed statistics are not available, but the National Council on Problem Gambling estimates that, nationally, 1% of the population meets the criteria for pathological gambling, and another 2-3% are problem gamblers. But as the Council points out in its literature, casinos don't "cause" problem gambling; they simply provide an opportunity to gamble for those who can't control their behavior. Absent casinos, problem gamblers would likely turn to other venues, such as Internet gambling.

What's more, the costs of problem gambling are largely internalized, rather than spilling over to the rest of the community. Problem gambling produces any number of strains, from poor physical and mental health, to job loss, unemployment, divorce, bankruptcy, and run-ins with the law. To the extent that problem gamblers commit crimes to support their habits, such behavior does have social consequences, but most of the hardships are of a personal nature, borne largely by the problem gamblers themselves, or by their families.

There may, though, be some "negative externalities" of legalized gambling: higher crime rates, increased traffic congestion, and lower property values. All are social costs generated by the activities of casino operators and their patrons that are passed off to the rest of the community rather than being paid for by the parties themselves.

SNAPSHOTS: BEFORE AND AFTER

Multivariate regression analysis can help determine whether Indian casinos have produced significant negative spillovers, and if so, measure the magnitude of their impacts. Adverse conditions such as crime, congestion and reduced property values all have complex roots. Crime, for example, depends on population and its density, unemployment, and the wealth of the community. Congestion is a function of the resident population, a town's role as a jobs center, and the amount of space people have to move around in. Property values hinge on the amenities of the homes and their communities, plus the characteristics of the residents who live there. The key is whether, taking all these factors into consideration, Ledyard, Montville, and neighboring municipalities, have suffered a significant deterioration in quality of life, as measured by these key indicators.

To find out, I examined some statistics before and after the advent of the casinos. Using Census and other data from 1990, before the casinos were introduced, and from 2000, after both casinos were fully operational, I estimated regression models for each of the potential "spillover" variables. Then I compared actual with predicted values for each of these variables, and looked for a significant, unexplained, deterioration of conditions in the target communities. Finally, I added an additional explanatory variable, average distance from Foxwoods and Mohegan Sun, to see whether proximity to the casinos had a significant impact on crime, property values or congestion.

CRIME

Consider the factors that influence crime. The incidence of crime varies positively with population and the share of young residents in the community, and negatively with the geographic size of a municipality—younger, more urban areas tend to have

continued on page 14

Using separate estimated regressions for crime, congestion and property values, I compared actual with predicted values for each variable.

higher crime rates than older, more rural or suburban areas. Crime also varies positively with unemployment and negatively with the wealth of the community—better economic conditions translate into lower crime rates. A simple regression model using these variables explains 76% of the variation in crime across Connecticut's towns in 1990 and 2000.

In 2000, crime rates in both Ledyard and Montville were below the level predicted by the simple model—not much evidence that the advent of casino gaming compromised public safety. What's more, between 1990 and 2000, crime dropped in both Ledyard and Montville. In Ledyard crime went from 14.3 incidents per 1000 residents to 11.9; in Montville the decline was from 19.5 to 15. But with few exceptions, crime dropped everywhere in Connecticut over this same period, from a 169-town average of 28.9 to 18.6. Why? The state aged demographically, and the economy improved markedly between 1990 and 2000. Unemployment plunged and town wealth, measured by the equalized net grand list, or value of taxable property in the town, made steady advances.

Still, the improvement in Ledyard and Montville's crime rates was smaller than the average for all Connecticut towns. Did the casinos bridle the two towns' efforts to take a bite out of crime?

To test this possibility, I added to the regression a variable measuring the distance from each town to Foxwoods and Mohegan Sun. Then I interacted (multiplied) the distance variable with a so-called dummy variable that assumed the value of zero for each town in 1990 and one for each town in 2000. Alone, the distance variable indicates whether crime varied by proximity to Ledyard and Montville even before the casinos were built. The interaction term reveals whether distance became an important factor after the casinos appeared or, if already key, whether the impact was differentially larger or smaller as the proximity to the casinos increased.

In the crime regression, neither the coefficient on distance nor the coefficient on the interaction term, distance times year, was statistically significant. That means that in 2000, after the casinos were built, crime rates for towns close to the casinos, including Ledyard and Montville, were not significantly higher than they were in 1990. In other words, opening the casinos didn't trigger more crime.

CONGESTION AND PROPERTY VALUES

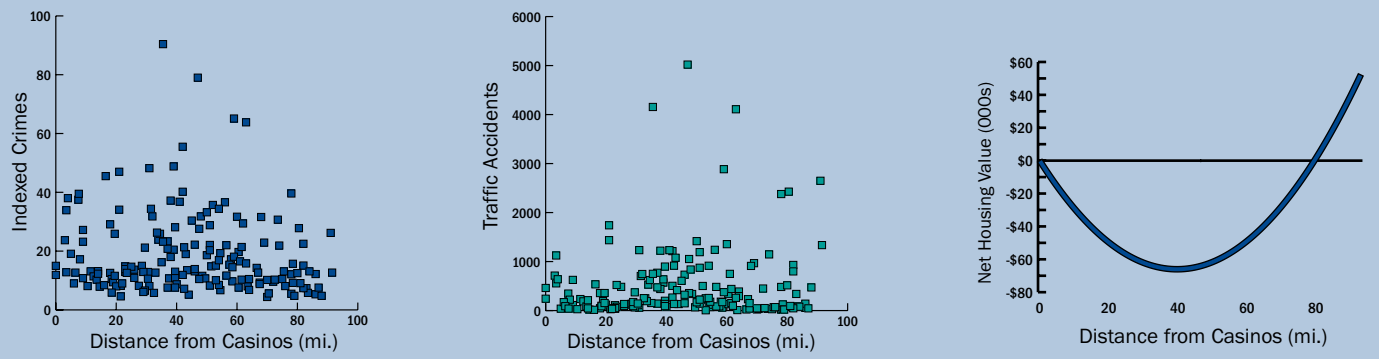
Much the same story can be told about the other "spillover" variables, congestion and property values. Town-level data on traffic congestion are not readily available, but a serviceable proxy measure is. The Connecticut Department of Transportation keeps detailed records on the number of motor vehicle accidents by town, and these incidents are strongly correlated with congestion. Accidents are much more likely to occur during morning and afternoon rush hours, for example, or near crowded shopping centers. And the variables that would help to account for congestion also do a good job accounting for accidents. Municipal population, the job count, and land area explain more than 86% of the variation in traffic accidents across towns. Packing more residents and more workers into a smaller area produces more congestion and more accidents.

Despite the surge in casino jobs and visitors, the towns appear to be absorbing the traffic remarkably well. In 2000, both Ledyard and Montville had fewer accidents than the simple regresssion model would predict. For Ledyard the incidents totaled 242, rather than the 442 expected; Montville had 497 accidents, 36 fewer than anticipated.

And for both towns, the actual less predicted accident count improved between 1990 and 2000. In 1990, Ledyard had 94 fewer accidents than expected, as opposed to 200 fewer in 2000. And Montville had 221 more accidents than expected in 1990, but 36 fewer than predicted in 2000. Perhaps the roadway upgrades that accompanied the arrival of the casinos improved the flow of traffic, or maybe the towns became more efficient at managing congestion.

Either way, there is no evidence of congestion spillover—positive or negative—from the casinos to surrounding towns. When added to the simple model of accident rates, neither the distance term in isolation, nor the

PROXIMITY TO CASINOS: NO IMPACT ON CRIME OR TRAFFIC ACCIDENTS, BUT A BOON TO PROPERTY VALUES



SOURCE: *The Connecticut Economy* using data from CT Department of Public Safety (Crime), CT Department of Transportation (Accidents), and the United States Census Bureau (Housing)

interaction between distance and time, showed a statistically significant connection to the number of accidents per town.

Finally, what about property values? Home prices vary positively with the size of units, proximity to large population centers like New York and Boston, lower property tax rates, per pupil education spending, and the educational attainment of the community. Between 1990 and 2000, median home values across Connecticut towns inched up by less than 1.5%. But in Ledyard and Montville home values dropped more than 8%. Unusual? Not really. A simple regression model of housing prices based on the key determinants sketched out above predicted a decrease in home values in these two towns of more than 20%. In fact, in 2000, actual home values were much higher than predicted—by nearly $15,000 in Ledyard and more than $25,000 in Montville. In 1990, by contrast, property values were $5,000 below predicted in Ledyard and only $400 above predicted in Montville. No evidence here of casinos holding back housing values.

Are the casinos actually helping to prop up values in Ledyard, Montville and surrounding towns instead? A modified version of the model that includes the distance variable and the interaction term suggests the answer to this question is likely yes. The distance variable alone was not statistically significant, so distance from Ledyard and Montville had no impact on home prices in 1990. But the interaction term, distance times year, showed a strongly significant (at the 1% level) non-linear link between home prices and distance to the casinos in 2000. So after the casinos appeared, properties in Ledyard and Montville became comparatively more valuable—$30,000 more than in towns 10 miles away, $50,000 more than in towns 20 miles away, and at the limit of the effect, over $66,000 more than in towns 40 miles away, holding other factors constant, of course.

LIKE A GOOD NEIGHBOR

So the evidence doesn't point toward much in the way of negative effects spilling over from the casinos to the immediate community. Proximity to the casinos seems of little consequence for either crime rates or the number of accidents. If the casinos have had any kind of spillover effect, the impact has been positive. Towns closest to Foxwoods and Mohegan Sun seem to have benefited from a relative surge in property values that followed the introduction of the casinos.

What's true for Connecticut, however, needn't be true elsewhere. Many studies of other gaming destinations, including Atlantic City and Las Vegas, have found significant social costs in the form of crime, congestion, and reduced property values. What's Connecticut's secret? Perhaps the relative isolation of the Pequot and Mohegan reservations has insulated the immediate and surrounding communities from the negative spillovers. Or maybe more of the patrons in Connecticut are day trippers, and when they leave, they may not be creating much of a logjam, but they may be carrying the ill effects of crime with them, diffusing it across the state or exporting it even further, to Massachusetts, Rhode Island, or New York. In any event, Connecticut appears to have largely escaped some of the most feared adverse consequences of hosting two of the world's largest gaming resorts.

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